

Amendments to the Claims:

This listing of claims will replace all versions and listings of claims in the application:

Listing of Claims:

1. – 58. (Cancelled)

59. (New) A circulating fluidized bed reactor comprising:

a reaction chamber;

a centrifugal separator for separating particles from hot gases coming from the reaction chamber, wherein the reaction chamber and the centrifugal separator have a common wall; and

an acceleration duct disposed between the reaction chamber and the centrifugal separator, wherein at least part of the acceleration duct is disposed within the reaction chamber.

60. (New) The circulating fluidized bed reactor of claim 59, wherein the common wall is a single wall.

61. (New) The circulating fluidized bed reactor of claim 59, wherein the common wall is a double wall.

62. (New) The circulating fluidized bed reactor of claim 59, wherein the common wall is straight.

63. (New) The circulating fluidized bed reactor of claim 59, wherein the acceleration duct is disposed entirely in the reaction chamber.

64. (New) The circulating fluidized bed reactor of claim 59, wherein the at least part of the acceleration duct is disposed in the top of the reaction chamber.

65. (New) The circulating fluidized bed reactor of claim 59, wherein the acceleration duct has an extrados whereby an inlet mouth of the acceleration duct is substantially parallel to the extrados of the acceleration duct.
66. (New) The circulating fluidized bed reactor of claim 59, wherein the acceleration duct has an extrados whereby an inlet mouth of the acceleration duct is substantially perpendicular to the extrados of the acceleration duct.
67. (New) The circulating fluidized bed reactor of claim 59, further including a rear cage wherein the rear cage and the reaction chamber have a common wall.
68. (New) The circulating fluidized bed reactor of claim 59, further including a rear cage wherein the rear cage and the centrifugal separator have a common wall.
69. (New) The circulating fluidized bed reactor of claim 59, wherein the reaction chamber, the centrifugal separator, and a rear cage are aligned.
70. (New) The circulating fluidized bed reactor of claim 59, wherein the reaction chamber, the centrifugal separator, and a rear cage are disposed at a right angle.
71. (New) The circulating fluidized bed reactor of claim 59, further including a deflector disposed in the reaction chamber that directs particles to the acceleration duct.
72. (New) The circulating fluidized bed reactor of claim 59, wherein the acceleration duct includes a floor that is inclined toward the centrifugal separator.
73. (New) The circulating fluidized bed reactor of claim 59, further including a rear cage that is horizontal.
74. (New) The circulating fluidized bed reactor of claim 59, further including a rear cage that is situated under the centrifugal separator.

75. (New) The circulating fluidized bed reactor of claim 59, further including a secondary separator is disposed between the centrifugal separator and a rear cage.
76. (New) A circulating fluidized bed reactor comprising:
- a reaction chamber;
 - a centrifugal separator for separating particles from hot gases coming from the reaction chamber, wherein a wall the reaction chamber and a wall of the centrifugal separator are contiguous; and
 - an acceleration duct disposed between the reaction chamber and the centrifugal separator, wherein at least part of the acceleration duct is disposed within the reaction chamber.
77. (New) The circulating fluidized bed reactor of claim 76, wherein the wall of the reaction chamber and the wall of the centrifugal separator are straight.
78. (New) The circulating fluidized bed reactor of claim 76, wherein the acceleration duct is disposed entirely in the reaction chamber.
79. (New) The circulating fluidized bed reactor of claim 76, wherein the at least part of the acceleration duct is disposed in the top of the reaction chamber.
80. (New) The circulating fluidized bed reactor of claim 76, wherein the acceleration duct has an extrados whereby an inlet mouth of the acceleration duct is substantially parallel to the extrados of the acceleration duct.
81. (New) The circulating fluidized bed reactor of claim 76, wherein the acceleration duct has an extrados whereby an inlet mouth of the acceleration duct is substantially perpendicular to the extrados of the acceleration duct.
82. (New) The circulating fluidized bed reactor of claim 76, further including a rear cage wherein the rear cage and the reaction chamber have a common wall.

83. (New) The circulating fluidized bed reactor of claim 76, further including a rear cage wherein the rear cage and the centrifugal separator have a common wall.
84. (New) The circulating fluidized bed reactor of claim 76, wherein the reaction chamber, the centrifugal separator, and a rear cage are aligned.
85. (New) The circulating fluidized bed reactor of claim 76, wherein the reaction chamber, the centrifugal separator, and a rear cage are disposed at a right angle.
86. (New) The circulating fluidized bed reactor of claim 76, further including a deflector disposed in the reaction chamber that directs particles to the acceleration duct.
87. (New) The circulating fluidized bed reactor of claim 76, wherein the acceleration duct includes a floor that is inclined toward the centrifugal separator.
88. (New) The circulating fluidized bed reactor of claim 76, further including a rear cage that is horizontal.
89. (New) The circulating fluidized bed reactor of claim 76, further including a rear cage that is situated under the centrifugal separator.
90. (New) The circulating fluidized bed reactor of claim 76, further including a secondary separator is disposed between the centrifugal separator and a rear cage.

91. (New) A circulating fluidized bed reactor comprising:
- a reaction chamber;
 - a centrifugal separator for separating particles from hot gases coming from the reaction chamber;
 - an acceleration duct disposed between the reaction chamber and the centrifugal separator, wherein at least part of the acceleration duct is disposed within the reaction chamber; and
 - a deflector disposed in the reaction chamber that directs particles to the acceleration duct.
92. (New) The circulating fluidized bed reactor of claim 91, wherein the deflector comprises tubes diverted from at least one wall of the reaction chamber.
93. (New) The circulating fluidized bed reactor of claim 91, wherein the deflector is formed by rounding a floor of the acceleration duct.